

# Electrical installation solutions for buildings

## Emergency Lighting

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# Emergency lighting

## A head of safety

By choosing ABB as your emergency lighting partner, you'll be placing your projects, your systems, and essentially your people, in safe hands.



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01 We support emergency lighting projects on all scales

When choosing a partner for emergency lighting, you need a supplier capable of delivering a solution whenever the need arises, whether you're planning a new build project, overseeing an installation, or considering renewal of a long-standing system.

We are a leading life safety solutions provider, delivering state-of-the-art systems and products into the emergency lighting marketplace.

We focus on supporting our customers at all points of the emergency lighting life-cycle, whether planning, installing, managing or renewing.

### Years of experience

Supporting emergency lighting projects on all scales, backed by friendly service, technical expertise and our continual drive towards new product innovation makes us the number one choice for emergency lighting.

Construction engineers and installers are assured that orders can be easily placed, deliveries arrive promptly, and that any issues are resolved quickly to a satisfactory outcome.

Our products and services are specifically designed to provide the most effective protection and safety, in line with customer needs, relevant standards and industry regulations. These solutions start at the planning stage for emergency lighting systems, with advice on product selection and system requirements, through to delivery of certified technical drawings.

With project time-lines tight and budgets constrained, choosing the right partner for emergency lighting system design is imperative. We would like to help you in making the right start.

We works at the heart of this complex process, assisting designers, specifiers, and final customers with all manner of emergency lighting needs.

# Efficient emergency lighting solutions

## Life-cycle

The concept is clear and simple. Providing you a reliable, total solution for safe evacuation. The way in which we do this is what makes the difference.

We offer advantages to everybody involved throughout the life-cycle process.

That way, you know that ABB is always the right choice, for both you and your customers.

### Advice and information during the design phase

In the design phase, it is important for you to have all the information. If desired, we can provide you with that in the form of specific project advice, based on the most recent regulations, standards and safety requirements. We always offers you the necessary information in the most compact form, so that you quickly have an overview of all the available information.

### Speed and materials during the installation phase

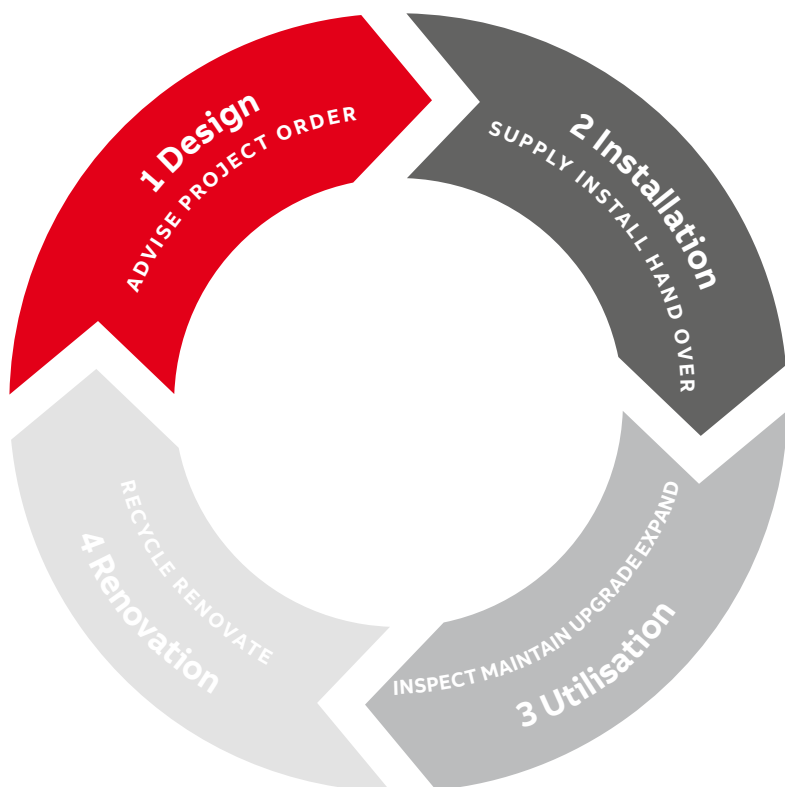
Speed and timing are essential during the installation phase, because the easy-to-install materials must be at the construction site at the right time. That is why luminaires are always in stock, or short lead time from the manufacturing facility. If you perform the installation yourself, clear assembly instructions, packaging instructions and a modular system give you a head start.

### Support during the utilisation phase

During the utilisation phase, we can advise on your emergency lighting installation and make sure it is aligned with the latest standards. That way, you guarantee optimal safety at minimum utilisation costs, thanks to low energy consumption and easy-to-replace parts and, if necessary, the people who are working, shopping, relaxing or sleeping in the building can quickly and safely find their way out.

### Altering and separating during the renovation phase

The new generation of emergency lighting products is ready for the renovation phase. We go further than the normal use of durable, environmentally-friendly, recyclable materials. The products are easy to disassemble and easy to dispose of separately in the legally required return and recycling flows. It is also easy to alter the new generation of luminaires using the individual modules.



# Emergency lighting process

## With you every step

During building construction or refurbishment, the focus for emergency lighting shifts from planning and design, to delivery and installation. We provide solutions that impact at all points of the emergency lighting life-cycle.



01 Easy-to-install product range

### Easy-to-install product range

Many of our products are engineered to a modular design format, which promotes straightforward, cost-effective installation and maintenance.

Modular design enables First-Fix installation of the key wiring components with later connection of geartrays, diffusers and legends etc, for easy management and replacement of parts.



02 Certified technical design

### Certified technical design

Central to emergency lighting is the technical design drawing. It defines luminaire positioning and spacing, drives the installation effort and provides the key control for commissioning and approval.

Our technical design team is on hand to advise and assist with design drawings for all types of emergency lighting system, to the latest relevant standards, with full certification for added confidence and peace of mind.



03 Project support

### Project support

Our project engineers and internal sales support teams are available to provide guidance on products and project updates/delivery schedules etc. This catalogue makes for a great starting point when considering emergency lighting, but is only a small part of our service.



04 Project consultation

### Project consultation

You can count on us to help with your emergency lighting planning. We offer expert assistance in emergency lighting scheme design, as well as clear, concise advice on product selection. Our dedicated team are able to assist you at your premises, and arrange for emergency lighting schemes to be prepared at our design office.



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05 Easy-to-install  
product range

The purpose of an emergency lighting system is to protect and safeguard life. Once commissioned and in operation, the emergency lighting system must function correctly throughout its lifetime and therefore requires ongoing management, maintenance and testing.

#### **Standards and legislation**

The need for testing and servicing is enforced by legislation, with both The Regulatory Reform (Fire Safety) Order 2005/ Fire (Scotland) Act 2005 and The Work Place Directive 89/654 making reference to proper maintenance of emergency lighting systems.

Any faults found need to be rectified as quickly as possible. For many building owners/occupiers, who have legal responsibility for these systems, maintenance, testing and access to replacement parts are of paramount importance. With this in mind, it's clear to see that maintaining the partnership with your emergency lighting supplier, even after commissioning, is highly important.

Our fully certified engineering team can provide, support and advice on maintenance and servicing of emergency lighting.

#### **Maintenance & servicing**

Our team of qualified and experienced service engineers is available to service emergency lighting systems and to ensure full working order, in line with appropriate British Standards.

**Term maintenance contracts are available. Contact our service team today to discuss your maintenance needs.**

#### **System testing & upgrades**

Owner/occupiers are legally obliged to test and maintain emergency lighting to BS 5266-1 and -8 (Simplified Testing Regime EN 50172).

Emergi-Lite manufactures a range of testing solutions for self-contained emergency lighting - Self-test, IR2, Naveo®Pro and Emex test addressable testing - to accommodate all levels of testing requirement.

## Emergency lighting portfolio

### Global Standards

Countries	Standards EU	Standards	Certifications	Brand	Page
FR, AL		NF C 71-801 NF C 71-802 NF C 71-803 NF C 71-804 NF C 71-805 NF C 71-820 NF C 71-830	NF AEAS NF performance SATI NF environnement	Kaufel	16/8, 16/9
UK, IE MEA: AE, QA, SA, OM, BH, EG, IN, ZA		BS 5266	Kitemark ENEC	Emergi-Lite	16/12, 16/13
DE, A, CH	EN 60598-1 EN 60598-2-22 EN 1838 EN 50171 EN 50172	DIN VDE V 0108-100-1 DIN VDE 0100-560 DIN ISO 3864-1 DIN 4844-1	ENEC (state of the art, but not an absolute must)	Kaufel & ABB	16/6 to 16/9
NL	(HD) IEC 60364-5-56 EN IEC 62485-2 EN 62034 EN-ISO 7010	Bouwbestluit (law) ARBO wet (law) NEN 1010 NEN 3011 NEN 2443	ENEC	VanLien	16/10, 16/11
BE, LU		Koninklijk besluit (law) ARAB (law) NBN-C71-100	ENEC Lastenboek 400 (LB400)	VanLien	16/10, 16/11
NEU: SE, DK, FI, NO, ES				ABB	16/6, 16/7
CEU: BG, HU, CZ, LT, MD				ABB	16/6, 16/7
MED: SP, IT, TR, PT				ABB	16/6, 16/7






## Emergency lighting portfolio

### Global Standards

Countries	Standards	Certifications	Brand	Page
US	CSA C22.2 No. 141 UL 924	UL CSAus	Emergi-Lite Lightalarms	16/16, 16/17
CA	CSA C22.2 No. 141 UL 924	CSA cUL	Emergi-Lite Lumacell Ready-Lite	16/18, 16/19
AU, NZ	AS/NZS 2293.2 AS/NZS 2293.1		Stanilite	16/20 to 16/25
ASIA: SG, TH			Stanilite	16/20 to 16/25

## Emergency lighting portfolio

ABB – EN1838

							
Range	Guideway	Ovano	Movion		PrimEvo	Optima 350	
	Self-contained	Self-contained	Self-contained	Slave	Self-contained	Self-contained	
Type of projects	Architectural	Commercial	Commercial		Distributor select	Distributor select	

Technologies							
NaveoPro (Europe)	■		■				
Self Test	■		■		■		■
DALI	■	■	■				
Standard				■			
FLX				■			
Emex Test				■			

Functions							
Escape route signage	■	■	■	■	■		■
Escape route lighting		■	■	■	■		■
Open area		■	■	■			

Degree of protection							
IP	IP40	IP20	IP20/ IP40/ IP42		IP20/ IP65	IP42/ IP65	
IK					IK10	IK10	



					
<b>Pharos</b>	<b>Nel-3</b>	<b>Aqualux</b>	<b>Serenga 2</b>	<b>MirEvo TwinSpot</b>	<b>Lutia</b>
Self-contained	Self-contained	Self-contained	Self-contained	Self-contained	Self-contained
Distributor select	Distributor select	Industrial	Architectural	Commercial	Industrial






			■	■	■
■	■			■	■
		■	■	■	■


■	■	■		■	
		■	■	■	■

<b>IP41</b>	<b>IP54</b>	<b>IP67</b>	<b>IP42/ IP54</b>	<b>IP65</b>	<b>IP65</b>
		<b>IK10</b>		<b>IK04</b>	<b>IK10</b>

## Emergency lighting portfolio






Kaufel-FR

										
Range	BrioSpot		Brio+		Primo3		PrimEvo		Indulux	
	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	Self-contained	Self-contained	Slave	Slave
Type of projects	Architectural		Commercial		Commercial		Distribution select		Industrial	
<b>Technologies</b>										
NaveoPro (Europe)	■		■	■					■	■
Self Test	■		■		■		■	■		
Standard										
Conventionnel		■		■		■				■
<b>Functions</b>										
Escape route signage	■	■	■	■	■	■	■	■	■	■
Escape route lighting	■	■	■	■	■	■		■	■	
Sleeping area	■		■		■					
Housing			■		■		■			
Handicap	■		■		■					
Lighting device			■							
<b>Degree of protection</b>										
Not Waterproof	IP 43 / IK 04 IP 43 / IK 08		IP 42 / IK 07		IP42 / IK07 IP 42 / IK 10		IP 42 / IK 10			
Waterproof			IP 65 / IK 10		IP 65 / IK 10		IP 65 / IK 10		IP 65 / IK 10	







							
		Altilied	DuoCompact	Duophare	EDF	BSL+	Réglettes
	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	Slave
	Architectural		Industrial	Industrial	Industrial	Commercial	Distribution select
	■	■	■				
	■		■				
					■		
		■		■		■	■
						■	
	■	■	■	■	■		■
					IP 42 / IK10		IP 42 / IK 04
	IP 65 / IK08		IP 65 / IK08	IP 65 / IK08	IP 65 / IK10	IP 68 / IK 10	

## Emergency lighting portfolio

VanLien-BE-NL-LU





											
Range	Evago		Serenga		Optilux / Horizon		Previx		Movion		
	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	
Type of projects	Architectural		Architectural		Commercial		Commercial		Industrial		
Technologies											
NaveoPro (Europe)	■		■		■		■		■		
Self Test	■		■		■		■		■		
DALI	■		■						■		
Standard		■		■		■		■		■	
FLX		■		■		■		■		■	
Functions											
Escape route signage	■	■	■	■	■	■	■	■	■	■	■
Escape route lighting	■	■			■	■	■	■	■	■	
Degree of protection											
IP	IP40/ IP42/ IP54		IP20		IP40/ IP20		IP40		IP20/ IP40/ IP42		
IK									IK04		

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	Solo	Aqualux		Indulux		Lutia		Decoled		Hiled	
	Self-contained	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave
	Distributor select	Industrial		Industrial		Architectural		Commercial		Industrial	
	■	■		■		■		■		■	
		■		■		■		■		■	
		■				■					
			■		■		■		■		■
			■		■		■		■		■
		■	■	■	■						
	■	■	■	■	■	■	■	■	■	■	■
	IP54	IP67/ IP65		IP 68		IP65		IP65		IP65	
		IK10		IK10		IK10		IK10		IK8	




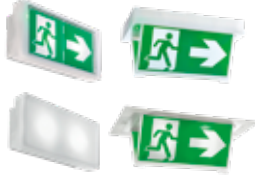

# Emergency lighting portfolio

## Emergi-Lite-UK-MEA

									
Range	Guideway		Horizon		Sivler Scope		Navigator Compact		
	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	
Type of projects	Architectural		Commercial		Commercial		Commercial		
Technologies									
NaveoPro (Europe)	■		■		■		■		
Self Test	■		■		■		■		
DALI	■								
Standard		■		■		■		■	
FLX									
Emex Test		■		■		■		■	
Functions									
Exit sign	■	■	■	■	■	■	■	■	■
General lighting									
Escape route					■	■			
Open area					■	■			
Degree of protection									
IP	IP20		IP20 / IP40		IP20		IP20		
IK									
Certifications									
ENEC Dekra	■		■						
ENEC LCIE BV									
BSI KM	■		■		■		■		
BSI ENEC									
IECEE CB	■		■		■		■		
NFPA101									

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Day-Lite Ex-Cel		Ovano	Movion		Optima	Primevo	
Self-contained	Slave	Self-contained	Self-contained	Slave	Slave	Self-contained	
Commercial		Commercial	Commercial		Commercial	Distributor select	
■			■				
■			■			■	
		■	■				
	■			■		■	
	■			■	■		
■	■	■			■	■	
■	■	■	■	■	■	■	
■	■	■	■	■	■	■	
IP65		IP20	IP20/ IP40/ IP42		IP65	IP20 / IP65	
					IK10	IK04 / IK10	
			■		■		
					■	■	
■							
■			■		■		
					■		





## Emergency lighting portfolio

### Emergi-Lite-UK-MEA

									
Range	Aqualux		Indulux		Weatherforce		Serenga 2		
	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	
Type of projects	Industrial		Industrial		Industrial/ Commercial		Architectural		
Technologies									
NaveoPro (Europe)	■		■		■		■		
Self Test	■		■		■		■		
DALI	■								
Standard		■		■		■		■	
FLX									
Emex Test		■		■		■		■	
Functions									
Exit sign	■	■	■	■	■	■			
General lighting									
Escape route	■	■	■	■	■	■	■	■	
Open area	■	■	■	■	■	■	■	■	
Degree of protection									
IP	IP20/ IP42/ IP65/ IP67		IP68		IP65		IP42 / IP54		
IK	IK10		IK10						
Certifications									
ENEC Dekra	■				■		■		
ENEC LCIE BV			■						
BSI KM	■				■		■		
BSI ENEC									
IECEE CB	■				■		■		



									
Hyled		Camarque		Cordona		MirEvo Twinspot		Lutia	
Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave	Self-contained	Slave
Architectural		Commercial		Commercial		Commercial		Industrial	

■		■		■				■	
■		■		■		■		■	
						■		■	
	■		■		■		■		■
	■		■		■		■		■






		■	■	■	■			■	■
■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■		■	■	■






IP65		IP20		IP65		IP65		IP65	
IK10						IK06		IK10	

	■		■		■				
■			■		■			■	
			■		■			■	
■			■		■		■		■

## Emergency lighting portfolio






Emergi-Lite & Lightalarms - USA

								
Range Emergi-Lite	Premier Exit		Premier Combo	Survive-All SVX	Survive-All SVX Combo	ELX		
Range Lightalarms	Grande Exit		Grande Combo	Severe XV & XVE	Severe XVE Combo	QLX & QLXN		
Type of projects	Commercial		Commercial	Industrial		Industrial	Distributor Select	
	Self-Powered	AC-Only & AC/DC	Self-Powered	Self-Powered	AC-Only & AC/DC	Self-Powered	Self-Powered AC-Only	
<b>Technologies</b>								
NexusPro (NAM)	■		■	■		■		
Self Test	■		■	■		■	■	
Standard	■		■	■		■	■	
<b>Functions</b>								
Escape route signage	■	■	■	■	■	■	■	■
Escape route lighting			■			■		
Damp Location	■	■	■	■	■	■	■	■
Cold Temperature				■		■		
Power over Ethernet								
California Energy Commission Title 20	■	■		■	■			
<b>Indexes of protection</b>								
NSF				■	■	■		
NEMA 4X				■	■	■		
Certification	UL	UL	UL	UL	UL	UL	UL	UL

						
	ELXN400-LED	RA		Premier Compact	Survive-All SV	EL-2LED
	UQLXN	RP		Grande Compact	Severe V	LCA-2LEDR
	Distributor Select	Architectural		Commercial	Industrial	Distributor Select
	Self-Powered	Self-Powered	Remote	Self-Powered	Self-Powered	Self-Powered
		■		■	■	
	■	■		■	■	■
	■	■		■	■	■
	■					
	■	■	■	■	■	■
	■	■	■	■	■	■
					■	
		■				
		■		■	■	■
		■	■		■	
					■	
	UL	UL	UL	UL	UL	UL

## Emergency lighting portfolio

### Emergi-Lite Lumacell Ready -CAN





						
<b>Range Emergi-Lite</b>	ES	ESC	Survive-All EN	Survive-All ENC	CMPS-E	
<b>Range Lumacell</b>	LS	LSC	LN	LNC	CMPS-L	
<b>Range Ready-Lite</b>	RS	RSC	RN	RNC	CMPS-RL	
Type of projects	Commercial		Commercial	Industrial		Distributor Select
	Self-Powered	AC-Only & AC/DC	Self-Powered	Self-Powered	AC-Only & AC/DC	Self-Powered
						Self-Powered
						AC-Only
<b>Technologies</b>						
NexusPro (NAM)	■		■	■		■
Self Test			■	■		■
Standard	■		■	■		■
<b>Functions</b>						
Escape route signage	■	■	■	■	■	■
Escape route lighting			■		■	
Cold Temperature				■	■	■
Power over Ethernet						
<b>Indexes of protection</b>						
NSF				■	■	■
NEMA 4X				■	■	■
Certification	CSA	CSA	CSA	CSA	CSA	CSA

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	<b>CMPC-E</b>	<b>ERAU &amp; ERAUR</b>		<b>JMC &amp; JMLC</b>	<b>Survive-All NXM</b>	<b>CM-SB</b>
	<b>CMPC-L</b>	<b>LRAU &amp; LRAUR</b>		<b>RC &amp; RGC</b>	<b>RG-NX</b>	<b>CM-SB</b>
	<b>CMPC-RL</b>	<b>RRAU &amp; RRAUR</b>		<b>LDC &amp; LDXC</b>	<b>TUF-NM</b>	<b>CM-SB</b>
	Distributor Select	Architectural		Commercial	Industrial	Distributor Select
	Self-Powered	Self-Powered	Remote	Self-Powered	Self-Powered	Self-Powered
		■		■	■	
		■		■	■	
	■	■		■	■	■
	■					
	■	■		■	■	■
					■	
		■				
		■	■		■	
					■	
	CSA	cUL	cUL	CSA	CSA	CSA

## Emergency lighting portfolio

Stanilite - AU-NZ

					
<b>Range</b>	Platinum exit LED Evago	Platinum exit LED Evago Theatre Mask	Platinum exit LED Edgelit recessed, original style square diffuser / Theatre Mask	Platinum exit LED Quickfit / Quickfit Theatre Mask	
	Self contained	Self contained	Self contained	Self contained	
Type of projects	Architectural	Architectural	Architectural	Commercial	
<b>Technologies</b>					
Nexus RF Infinity	■	■	■	■	
Single Point Unit	■	■	■	■	
DALI			■	■	
Nexus LX			■	■	
<b>Functions</b>					
Exit sign	■	■	■	■	
Escape route lighting					
<b>Degree of protection</b>					
Degree of protection	IP 20	IP 20	IP 20	IP 20 / IP65	







					
	<b>Platinum exit LED Edgelit Quickfit / Recessed</b>	<b>Platinum exit LED Weatherproof</b>	<b>Platinum exit LED Quickfit Vandal Resistant</b>	<b>Platinum exit LED Quickfit Jumbo</b>	<b>Platinum exit LED Jumbo</b>
	Self contained	Self contained	Self contained	Self contained	Self contained
	Commercial	Commercial	Industrial	Industrial	Industrial
	■	■	■	■	■
	■	■	■	■	■
	■				
	■	■	■	■	■
	■	■	■	■	■
	IP 20	IP 65	IP 20 / IK 10	IP 20	IP 20








## Emergency lighting portfolio

Stanilite - AU-NZ

					
<b>Range</b>	<b>Platinum exit LED Jumbo weatherproof</b>	<b>Economy Exit LED (wall mount, slide connect, ceiling mount)</b>	<b>Platinum Spitfire LED (recessed non-maintained)</b>	<b>Platinum Spitfire LED</b>	
	Self contained	Self contained	Self contained	Self contained	
Type of projects	Industrial	Distributor select	Commercial	Commercial	
<b>Technologies</b>					
Nexus RF Infinity	■		■	■	
Single Point Unit	■	■	■	■	
DALI			■		
Nexus LX	■		■	■	
<b>Functions</b>					
Exit sign	■	■			
Escape route lighting			■	■	
<b>Degree of protection</b>					
Degree of protection	IP 65	IP 20	IP 20	IP 20	














				
<b>Platinum Spitfire LED (weatherproof non-maintained)</b>	<b>Platinum Batten LED - 4 foot</b>	<b>Platinum Batten LED weatherproof - 2 foot</b>	<b>Platinum Batten LED weatherproof - 4 foot</b>	<b>Platinum Batten LED weatherproof - 5 foot</b>
Self contained	Self contained	Self contained	Self contained	Self contained
Commercial	Commercial	Commercial	Commercial	Commercial
■	■	■	■	■
■	■	■	■	■
■	■	■	■	■
■	■	■	■	■
■	■	■	■	■
IP 67	IP 40 / IK 06	IP 65 / IK 08	IP 65 / IK 08	IP 65 / IK 08



## Emergency lighting portfolio

Stanilite - AU-NZ

					
<b>Range</b>	<b>Platinum Batten LED Vandal proof IK10 Nexus - 2 foot</b>	<b>Platinum Flood light LED weatherproof</b>	<b>Platinum Circular LED weatherproof</b>	<b>Economy Exit LED (base)</b>	
	Self contained	Self contained	Self contained	Self contained	
Type of projects	<b>Commercial</b>	<b>Commercial</b>	<b>Commercial</b>	<b>Distributor select</b>	
<b>Technologies</b>					
Nexus RF Infinity	■	■	■		
Single Point Unit	■	■	■	■	
DALI					
Nexus LX	■	■	■		
<b>Functions</b>					
Exit sign					
Escape route lighting	■	■	■		
<b>Degree of protection</b>					
Degree of protection	IP 20 / IK 10	IP 65	IP 65 / IK 08	IP 20	

				
<b>Economy Spitfire LED (recessed)</b>	<b>Economy Spitfire LED (surface)</b>	<b>ECO Flood Light LED weatherproof</b>	<b>Economy Batten LED - 4 foot</b>	<b>Economy e-Luna Circular LED</b>
Self contained	Self contained	Self contained	Self contained	Self contained
<b>Distributor select</b>	<b>Distributor select</b>	<b>Distributor select</b>	<b>Distributor select</b>	<b>Distributor select</b>
■	■	■	■	■
■	■	■	■	■
IP 20	IP 54	IP 65	IP 40 / IK06	IP 20

# DALI emergency lighting

## Why use DALI with emergency lighting?

Regular system checks must be carried out to guarantee that any emergency lighting system is fully operational. Emergency lighting with DALI constantly monitors the system, storing reports of any failures or issues and ensuring that the system is 100 percent healthy for the maximum time possible. The health of building occupants is assured, and automatic monitoring reduces maintenance costs.

### DALI emergency system key features:

- Central monitoring from touch screen panel
- Report logging software
- Functional and full duration tests
- Faults reported to central computer, reducing maintenance time and costs
- Fully addressable emergency system with central test to BS-EN and IEC standards
- Switching of maintained luminaires, individually or per group
- Scheduled tests can be programmed via the touch screen panel and automatic tests can be staggered minimising disruption to building users and still protecting every area in case of a real emergency
- Based on the international industry standard DALI protocol
- Utilises standard DALI bus wiring

## Advantages of using DALI with emergency lighting



**1. Proven DALI technology specific for emergency lighting**



**2. Our DALI solution is based on non-proprietary systems. As long as all components of a system are DALI compliant, they will be able to communicate with each other**



**3. Cost-effective solution with reduced maintenance costs after commissioning**



**4. With the addition of the ABB DALI gateway, we can connect our DALI luminaires with KNX systems and BMS**



**5. DALI (DiiA) Certified**

# — DALI emergency lighting

## Safety of emergency lighting



It has never been more important to ensure the safety of a building, because ensuring safety requires full knowledge that the emergency lighting is fully operational and healthy. DALI emergency is an extension of the DALI protocol, allowing for monitoring of the status of emergency fittings from a touch screen. Proven DALI technology is specific for emergency lighting.

### **About DALI emergency**

DALI - Digital Addressable Lighting Interface - is an open standard defined under EN62386. This standard ensures that all DALI-compatible emergency control systems work in synchronization and that the technology is available to multiple device manufacturers. DALI emergency lighting is a cost effective monitored emergency system that often betters the traditional systems

As a standalone monitored emergency system DALI emergency can monitor lamp and battery status and advise whether the luminaires are working, faulty, charge levels and hours of use in either normal or emergency operation.

As DALI is a two-way communication protocol, the central control can send commands to the luminaire and they will send back information to the control system.

It's a mandatory requirement that building owners are taking steps to ensure that their emergency lighting installations are routinely tested, with detailed records maintained. The associated labour costs have resulted in the owners of many larger buildings or building complexes investing in automated centralised test systems.

This type of system has also become increasingly popular since changes to the fire regulations now place the legal responsibility for recording these testing procedures solely with the building owners.

The benefits of using DALI central test systems for emergency lighting applications are wide-ranging:

- Increased safety
- Reduced maintenance labour time
- Ongoing monitoring savings

# DALI

## What is DALI?

DALI (Digital Addressable Lighting Interface) is a data protocol and transport mechanism that was jointly developed and specified by several manufacturers of lighting equipment.

It is essentially a network connected by a pair of cables and powered by a power supply. The common platform of DALI enables equipment from different manufacturers to be connected together. ABB's DALI is designed to work with all DALI-compliant equipment displaying the DALI logo.

Put simply, DALI (digital addressable lighting interface) is a two-way communication system that brings digital technology to lighting.

An international standard for communication, DALI allows individual ballasts to “talk” to the user and allows the user to “talk” back via DALI controllers.



DALI is a testing and control system that offers both flexibility and reliability.

### Bus wiring

In terms of wiring a DALI system also includes the bus wires that are used to connect together the DALI terminals of the various devices in the system.

- Standard 2-core cable (1.5mm<sup>2</sup>)
- 5-core cable possible to enable power and data
- Polarity free & free wiring topology
- maximum 64 devices per subnet (Hub/Routers)
- maximum 300m cabling
- maximum 250mA device consumption

### Control devices

Control devices can provide information to other control devices and can send commands to control gear. Input devices are a type or a part of a control device that provides some information. Application controllers are also a type or a part of a control device and are the decision makers in a DALI system – for example, they can send commands to control gear to modify the lighting or test an emergency lighting system.

### Bus power supplies

At least one bus power supply must be present in a DALI system. This is necessary to allow both communications on the bus, as well as to power any bus-powered devices. The bus power supply does not need to be a separate unit – it could be part of another device such as an DALI control unit or a KNX DALI gateway.

ABB has 3 different power supply options.

The central control DALI Touch screen panel or the KNX DALI gateway. Only one power supply is needed in each network.

### Control gear

Control gear usually contains the power control circuit to drive lamps, or some other type of output such as on/off switching.

# DAI emergency lighting

## Testing & monitoring

ABB DALI emergency lighting offers automatic test functions from either a central controller or from the luminaire itself. This ensures you will always know the status of your emergency fitting. Effective monitoring helps to ensure the safety of building occupants and give building owners the peace of mind they require.

01 DALI emergency lighting and control system - Normal

02 DALI emergency lighting and control system - Error detected

### Automatic testing & monitoring

Automatic monitoring includes the status of battery charging and the status of the main power supply. Central testing includes the current battery charge condition, functional tests and duration tests. Test frequencies can be adjusted to meet the requirements of the building or the local regulations. Testing periods can vary from weekly to monthly in the case of function tests, or annually for duration tests.

### Function test

A function test that simulates a mains failure and checks the operation of the emergency light from the battery supply. If there is a failure during a function test, the local indicator LED changes its status on the luminaire.

### Duration test

A duration test simulates a power failure and checks the operation of the emergency light from the battery supply for the rated duration of the product. Duration tests can be one, three hours or more depending on the local regulations. If there is a failure during a duration test, the local indicator LED alerts you to a problem or, in the case of a

system monitored from a central location, the emergency lighting DALI control unit (DCU) will alert by showing an error message. As with all central test systems that require annual duration testing, this is only started after the battery has had an initial uninterrupted 24 hour+ charge period.

### Local testing

Function and duration tests are initiated by the emergency light fitting. It performs automatic testing according to the locally stored settings.

### Central testing

Function and duration tests are initiated by the DALI control unit and displays results on the screen.

### Switching

Maintained luminaires can be switched and grouped.

## Emergency lighting and control unit



01



02

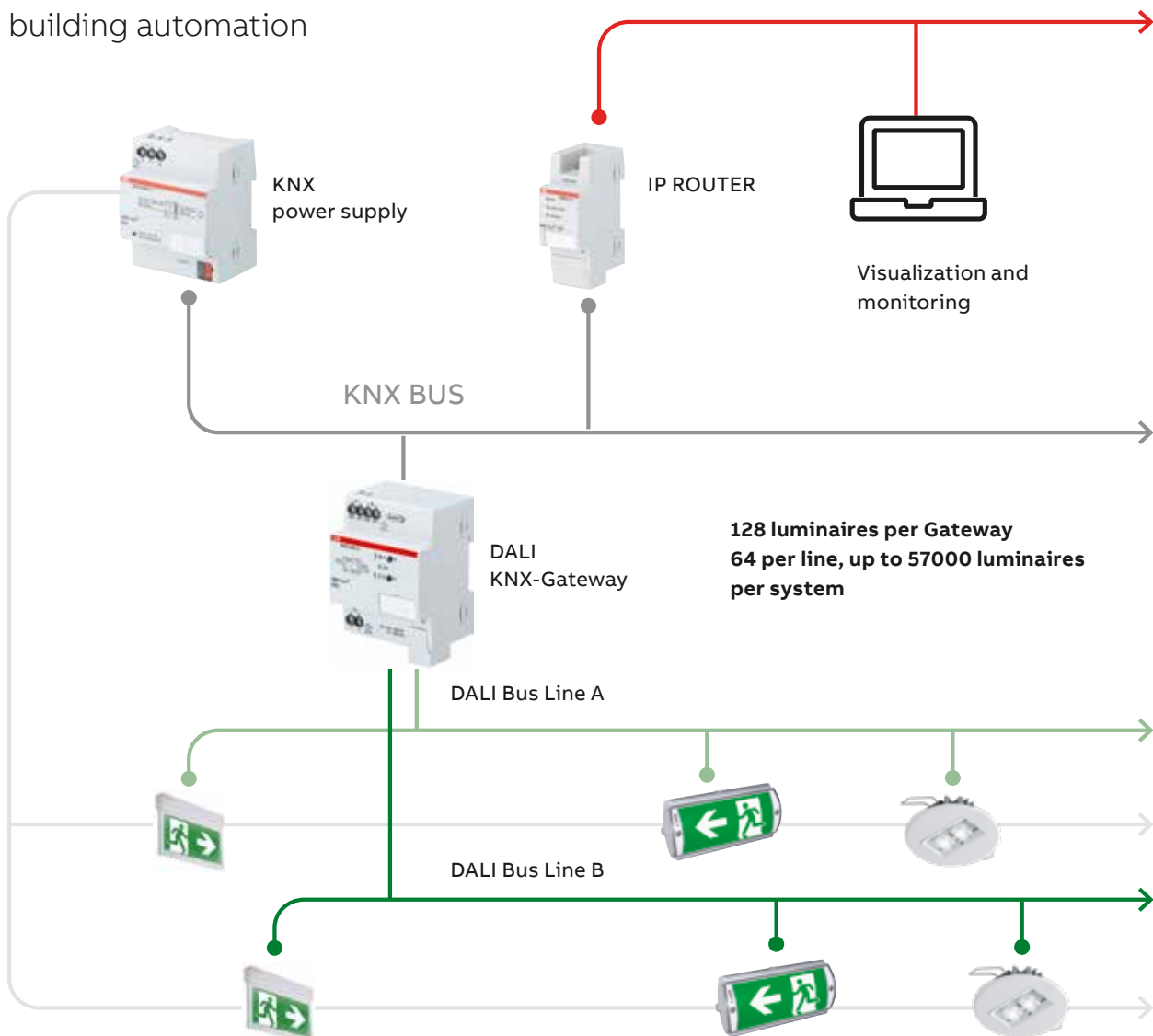
# KNX Integration

## Connection via DALI-KNX Gateway to KNX systems

- Central monitoring, testing and control via the KNX building automation through integration of DALI self-contained emergency lighting via the DALI-KNX Gateway
- Alternative to the DALI emergency lighting control unit - ELDCS (both can't be used together)
- DALI-KNX Gateways for 64 and 2x64 luminaires
- Can be combined with DALI luminaires for general lighting
- Additional software required for use



### DALI-KNX Gateway with integration in building automation





## DALI control unit (DCU)

Productivity & reliability



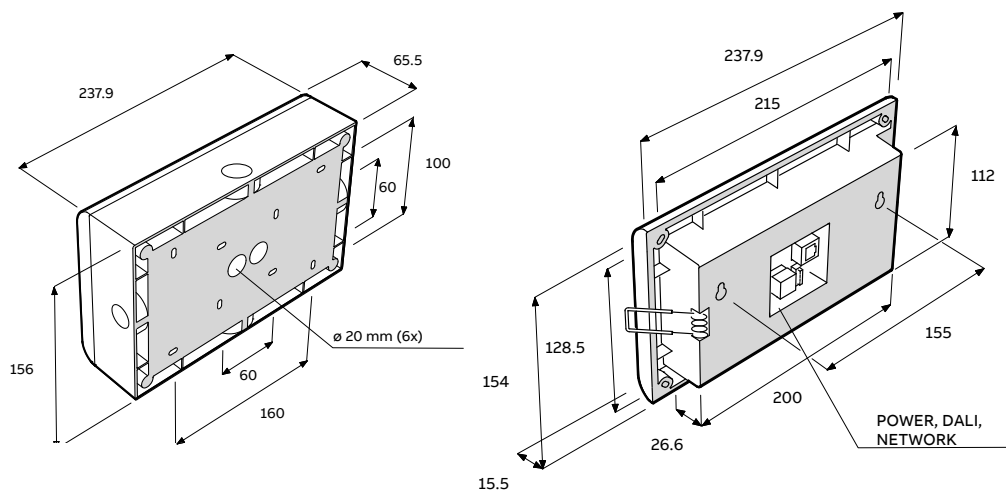
### DALI emergency lighting control panel

- Ensuring building occupant safety
- Touch screen to control, test and monitor emergency lighting
- Simple to group and easy to install



### Control unit

Type Code	Order code	Material code	Description
ELDCS1/DALI/ABB	7TCA305060R0005	ELDCS1/DALI ABB	DALI emergency control unit



# Naveo®Pro

## The emergency lighting inspection and maintenance solution

The Naveo®Pro inspection and maintenance system provides a digital overview via the cloud – providing ready information to assist resource planning and enhance building safety. This information can be processed directly using a mobile device.

01 The ABB Ability™ platform is an integrated Internet platform and cloud infrastructure.

In practice, this will save you time on collecting and entering information. Naveo®Pro gives you integrated cyber security for safety and reliability, enables better maintenance planning, and reduces operating costs.

### Overview in inspection and maintenance

In practice, ongoing inspection, maintenance and testing of emergency lighting is a time-consuming process with a great deal of work that has to be carried out regularly during every year that the installation is in place. These costs can be outweighed with a centralised automatic test system.

With Naveo®Pro you can concentrate on what matters: letting your emergency lighting luminaire system manage itself and reduce the amount of time monitoring it. This will quickly save you a considerable amount of money on maintenance time, allowing you to focus on problems quickly and as they happen. In figures, this could have potential savings of up to 30% on costs each and every year.

### An overview of the advantages

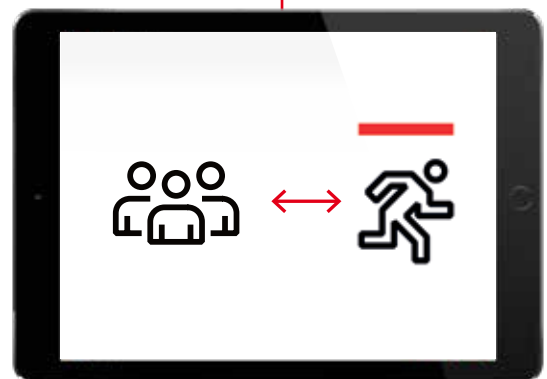
- Inspection and maintenance software for mobile device
- Save time in planning maintenance ahead
- 24/7 overview of all monitored buildings via google maps
- Save administration time with on-site data entry using your mobile app
- Status alerts pushed to your mobile device
- Automatic list of (replacement) parts, including article numbers
- Ensuring that intended design of the emergency lighting installation is never compromised
- Documents can be used to prove safety of building to insurance companies, e.g. Liability and Buildings Insurance



Share information with your service team  
All-in-one tool for Naveo®Pro users

### ABB Ability™ enables Intelligent Buildings

ABB Ability™ connects our customers to the power of the Internet of Things and, through our services and expertise, goes further by turning data insights into the direct action that "closes the loop" and generates customer value in the physical world.



## Naveo®Pro

The emergency lighting inspection and maintenance solution

01 The Naveo®Pro architecture for emergency lighting consists of three tiers; emergency lighting luminaires, the ABB gateway and the cloud.

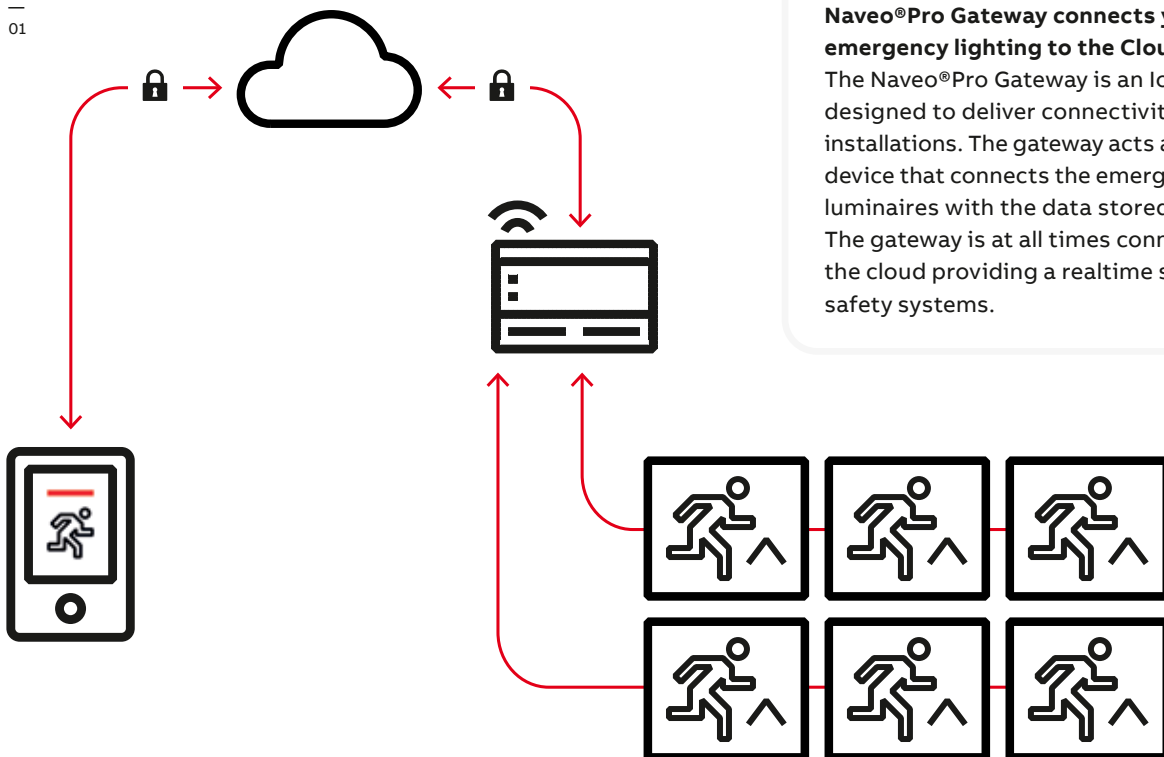
Connecting your emergency lighting luminaires to the ABB gateway is simple and makes real time system status information readily available and easy to process via the cloud. Having this information enables you to get status directly to your mobile device. This method of accessing controlling, and monitoring the status of your installation, makes maintenance of your installation a great deal easier.

### How does it work?

With Naveo®Pro being connected all the time, your emergency lighting system is always fully up to date. You can easily set up the connection:

- The Gateway continuously receives all luminaires data and pushes this information to the Naveo®Pro app.
- On continuous request from the cloud the Gateway automatically sends all (test) data to the Naveo®Pro app. With Naveo®Pro you are therefore constantly in touch with your system status anytime and anywhere.
- During a visual inspection of your building you can add notes directly into the app which means you can record your visual risk assessments in one place.

01



### Naveo®Pro Gateway connects your emergency lighting to the Cloud

The Naveo®Pro Gateway is an IoT Gateway designed to deliver connectivity to all types of installations. The gateway acts as a networking device that connects the emergency lighting luminaires with the data stored in the cloud. The gateway is at all times connected to the cloud providing a realtime status of your safety systems.

\* Up to 500 luminaires per gateway.

# The Naveo®Pro app

Set up, maintain and fully control your entire emergency lighting installation with a new mobile app.

The Naveo®Pro App provides a real time overview of all systems, saving time, enabling better maintenance planning and enhancing building safety. With the Naveo®Pro app, all types of emergency luminaires can be easily installed and programmed into a building in a fast and intuitive way using a QR code.

Through the ABB Ability™ platform, the system provides a digital overview via the cloud, giving instant information to assist resource planning and enhance building safety, which can be processed directly from a mobile device.

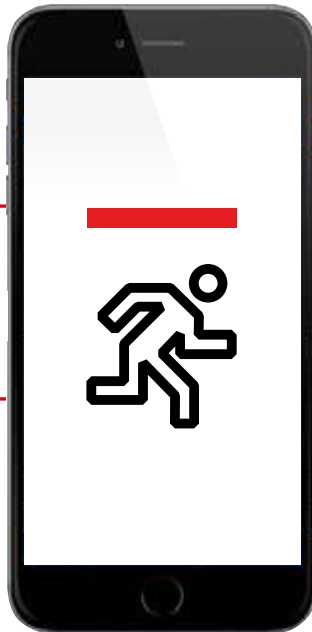
With emergency luminaire data stored in the cloud, the mobile app provides a 24/7 overview of all smart monitored buildings via Google maps. Building maps can be uploaded and overlaid onto Google maps, showing its current status and providing a clear and precise location of the emergency lighting luminaire.



**Set-Up**  
Easily install and add new devices to your building through a list or map



**Maintain**  
Defective devices are automatically detected and reported on your device in addition to push notifications



**Test**  
Run test instantly or program them to ensure that all your devices are working properly



**Share**  
Easily share the results of tests with other people on your team

### Naveo®Pro system components

Order Code	Description
51000040	Naveo®Pro GW 1.0
758740	Naveo®Pro Gateway mounting plate
51000041	Naveo®Pro GW 1.0 wired and iPad wifi
51000042	Naveo®Pro GW 1.0 wired and iPad cell
758730	Naveo®Pro antenna 5 GHZ wifi

# Nexus®Pro

## A new age of intelligent solutions

Our lives are touched daily by the Internet. It widens our horizons and improves our capabilities by connecting us to a wider community and their collective knowledge.

For over a decade, ABB has been working to develop and enhance process control systems, communications solutions, sensors and software for the Internet of Things (IoT). These technologies enable all building owners in industries, utilities and infrastructure to analyze their data more intelligently, optimize their operations, boost their productivity, and their flexibility. ABB is advancing the IoT by helping customers enhance their existing technologies, while keeping sight of our enduring commitment to safety, reliability, cybersecurity and data privacy.

### High level of cybersecurity

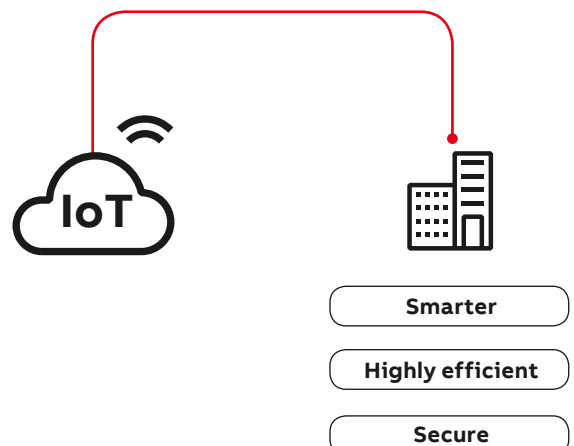
Cybersecurity can be a big concern in the world of IoT. Over the year, cybersecurity for automation and control systems has gained a lot of attention and is becoming increasingly important for all building managers or owners.

In the age of IoT, it's clear that "security" means much more than protection against cybercrime: certainly, connections need to be safe, but the value of that data should also be protected. Customers should not be required to forfeit safety, value, or control in order to realize the benefits of digitization.

By understanding market conditions, customer needs and the cyber environment, ABB strives to achieve and exceed the required levels of cybersecurity without compromising operational performance. Our solutions are aimed at reducing business risk, providing comfort and confidence, as well as enabling compliance with standards and legal requirements.

### Digital connectivity

Driving change and innovation



# Nexus<sup>®</sup>Pro

## Solution and benefits

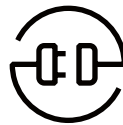
Nexus Pro is designed to enable building owners and managers to easily maintain and test emergency lighting, without the need to visually verify performance or disrupt the power supply.

With digital solutions, building owners now can have peace of mind knowing their buildings are safer than ever. All operations can be managed remotely, giving building owners and managers complete control wherever they are, whenever they need it most while preventing any human error in the process.



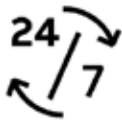
### Cost effective

- Reduce labor costs for maintaining emergency lighting
- Saving on cost and labour on manual collection and recording of emergency lighting data
- 200 emergency lighting units on one gateway • Reduce Monitoring costs by simply receiving notification once there is defective device



### User friendly

- Monitor remotely anywhere at anytime
- Fast and easy testing with a smart device
- Interactive 2D floor plan layout showcasing emergency lighting positioning
- Software updates automatically applied
- Easily go from one building to many with our scalable system



### Enhanced Safety and Protection

- Comply with Building and Life Safety Codes and other North American regulations
- Real-time self-monitoring and maintenance alerts if units stop functioning
- Holds all emergency lighting testing and maintenance data in a secure ABB cloud
- Ownership of maintenance data input, quick testing and device monthly and annual scheduling



### Improve installation efficiency

- Quick and flexible commissioning
- Ease of use due to app configuration
- Get diagnostics and part number recommendations during failures



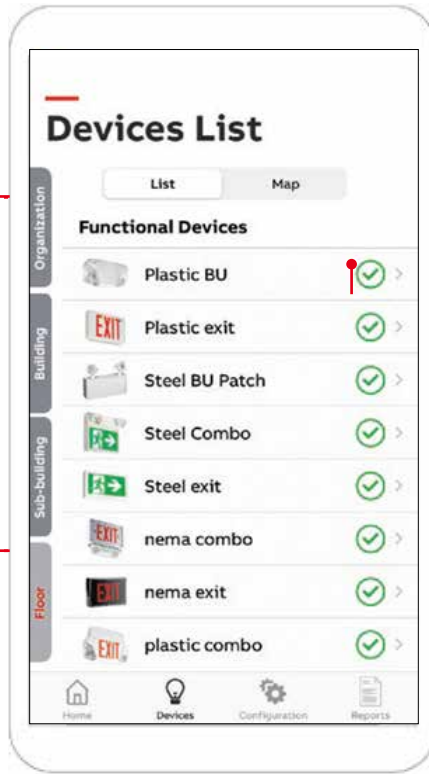
**Set up**

Easily install and add new devices through your smart device



**Maintain**

Defective devices are automatically detected and reported on your interface in addition to push notifications



**Test**

Run test instantly or program them to ensure that all your devices are working properly



**Share**

Easily share the results of tests with team members, maintenance staff and technicians



